

1

April 29, 1977 -- I was just finishing packing. Jim Davis and Lynn McMahon were going to help me move my boxes to an apartment I had rented in Rochester, Minnesota. I had accepted a job with IBM as a programmer in a peripherals group for \$17,000 per year.

My salary on a National Science Foundation research grant had been \$12,000 per year. I had that position since September, 1976. I had lived in Ames, Iowa for two years. The whole time I rented a small house at 403 1/2 Lincoln Way for \$125 per month. The owner was Gene Harris, who also owned Harris TV and Appliance, right next to the house. Behind the house was the double-track, Chicago and Northwestern main line. On the other side of the house was a Sambo's restaurant. In the front was a parking lot.

The house was small. It had a kitchen and dining room in the front. A living room had a small door which exited into the Sambo's parking lot. The bedroom was barely large enough for a double-bed. It had a shower stall in the same room and the toilet was in the closet.

The roof leaked in the rain. One morning I was sitting in the kitchen when the ceiling gave a sigh and it started raining vermiculite insulation from where the plasterboard had soaked and broken loose. The pipes froze in the winter. Once a train even derailed with a thunderous crash around, but not through, the house.

I came to Iowa State University as a graduate student in Computer science. The department head was Robert Stewart. He gave me a research assistantship under Stephan Silverston who was working with Gary White of the music department. The project was called DSMUS (Iowa State Computerized Music System). I met Steve Christiansen who was an EE grad student as DSMUS was also a joint project through Terry Dmay of the Electrical Engineering Department.

DSMUS had a PDP 11/20 with 8K core. They built their own UNIBUS cards to control a Buchla synthesizer. With a paper-tape operating system they had two programs running. Score and Play was a real time music interpreter which allowed students to enter a score and play 2 voice music. The second

program allowed students to define envelopes and play them real time.

My first year was spent writing a DOS for the ISMUS system. We purchased an RX-11 hard disk from the Newman Computer Exchange of Ann Arbor, Michigan. The ISMUS System was used to teach Music 346, an introductory computer music system. We used DEC multi-user BASIC with two terminals and 8K of core. Scott Patterson joined us in the summer of 1976 and started work on hardware.

Meanwhile, I became a micro-computer pioneer. I built the TV typewriter II from the Radio-Electronics plans. I attempted to duplicate the Mark-8, 8008 system also shown in the same magazine. It was October, 1975. Roger Camp of the EE department put a flyer from PERECC (later microcomputer Associates) that advertised the Jolt computer for \$159. I sent my check that day. I introduced myself to Roger Camp. He showed me the first MDT-650 prototype that had been given to Iowa State University. He introduced me to Mike Corder and Jerry Nuebaum of Compass, one of the contractors for MCS.

I built my job kit and started using the MOS 6502 cross assembler running on the IBM 360 at school. I wrote my own 6502 Tiny BASIC from notes in Peoples Computing newsletter and Dr. Dobbs journal. A friend, Paul Gilliam, introduced me to the first issue of a new magazine, devoted entirely to micro-computing, -BYTE. I bought the OAE (Oliver Audio Engineering) paper tape reader. It was hand powered and used a photo-diode array. I had to use a portable lamp and tune it for each tape. I bought a Sifton paper tape punch mechanism and interfaced into a 6520. I bought a Sweda cash register printer and built all the interface to control it as well. I wrote my own editor-assembler-loader package. The assembler was one-pass and kept a forward reference table.

Compass heard what I was doing and hired me to translate the MDT assembler into PDP-11 code to make a new cross-assembler. The MDT assembler was produced from the FORTRAN cross-assembler. This can be verified today by looking at the labels. The subroutines were labeled

A-N and the FORTRAN line numbers attached-. e.g. H8895. The completed development system included a simulator called MIN/MAC.

My Jolt system even paid for itself. Roger Camp had a personal business called Camp Instruments. He was developing a microprocessor controlled meter and Seiko printer for home heating oil delivery trucks. He called this company "Midwest Meter". First I edited and assembled his source code then I rented him my system for debug.

It was about 11 a.m. on April 29, 1977. It was Saturday. My friends weren't coming until noon to help me with the move. I decided to visit the ISU campus one more time. I wanted to say good-bye to Roger because he had been away in California all week. I found him the 215 Coover Hall, the micro-computer lab.

"Say, did Chuck Peddle get in touch with you yet?" said Roger.

I said, "Who?"

"He works for Commodore in California." "He has a real neat project I think you should see." "I was just talking to him last night and I think it would be worthwhile to give him a call."

"Here's the number - 415 326-4000" "Call him collect - I'm sure he's there"

So I did, Shirley Peddle, Chuck's wife, answered, and accepted the charges. I explained who I was and mentioned Roger's name. She put Chuck on the line.

"Call up United and get yourself on a flight out." Give us a call back when you get reservations so we can pick you up. I think you'll want to stay out here -- its more interesting than IBM. If you don't want to stay, we'll fly you back to Rochester. I know your moving so we'll pay to move your stuff later.

I didn't know what it was, but it sounded interesting. Besides, I had time to do the moving later. I called the airline and my friend Lynn McMahon. "Lynn", I said. "Can you store my boxes for a couple of days?" I filled him in on what was happening. "I can't believe this is happening" said Lynn, "but, alright." Lynn was also hired by IBM in Rochester.

He met me at my house at about 1 o'clock. I had a 3:30 pm plane from Des Moines, 30 miles south. We moved all my stuff to his basement, showered, and put on a suit. It

was the only thing I hadn't packed. By coincidence my suit was blue. So were all my socks, shirts, and pants. Because I was stuck with wearing these clothes for two weeks everyone was to later think I only had blue.

Back at my house I called Commodore to let Chuck know when I was coming so he could meet me. Shirley answered and said he would be wearing a red and white striped shirt, white pants, and blue deck shoes. "He will look like he has been out sailing for the day but he hasn't -- he has been working here" said Shirley. Later I was to learn that his cancelled sailing date was with Bill Thomas.

I ripped the phone off the wall and gave it to Gene Harris to give back to the phone company. Gene gave me back my deposit. I hopped in the car and raced down I-35 from Ames to Des Moines. My VW 411 shook violently. I had just bought new tires and they were not balanced.

I barely made the plane. I ran for the gate and they slammed the aircraft door behind me. I switched planes in Denver and flew direct to San Francisco.

I arrived in San Francisco in the middle of a rainstorm -- the first in two years. The stewardess gave the advice, "conserve water, shower with a friend." I didn't know ~~there~~ was a drought.

Chuck Reddle met me at the gate. He was easy to spot. He was the only one to be dressed in a sailing outfit. I met the rest of the crew. Bill Seiler, wearing shorts, and long blonde hair in a ponytail, met us near the baggage claim. Shirley Reddle was circling the airport arriving flights area to avoid parking. She was driving a Ford Maverick with Arizona plates and tires so bald you could see the air.

Chuck took the driver's seat and I the right-front passenger. Shirley and Bill sat in the back. Chuck immediately offered me a job. He explained that I came highly recommended. (obviously my friend Roger Camp) I told him right out that my IBU offer was \$17,000. Chuck said not to worry about money and that Commodore could beat that easily.

Chuck drove south through the rain on US 101. His driving style was the ultimate in closed-loop control. His foot moved up and down on the accelerator in response to the twitches of the speedometer needle.

We exited on ~~Page~~ Oregon Expressway in Palo Alto and then I got lost as we made five U-turns in a row at the intersection of Page Mill Rd and the El Camino.

We ended up at the Antique, a restaurant in Palo Alto. I really wasn't hungry because I had dinner on the airplane. I also felt uncomfortable because I was the only one wearing a suit. This was unlike any interview I had ever had. But I felt like I was part of a family. Everyone was friendly. I didn't have to sell myself like on the other interviews, and the project sounded interesting.

"You heard of the Pet rock--we have the PET computer" said Chuck.

It was to be the first completely self-contained and affordable personal computer. I could appreciate this. I had spent a lot of time and money building a computer and peripherals and here was something for \$595 that included

a keyboard, CRT, cassette, 4K RAM, and ran a full BASIC. Chuck explained they needed a programmer desperately because they were a month behind schedule and they had an important show coming up.

After dinner I saw the PET. We drove around the corner to the Commodore plant at 901 California Ave. Chuck had a key. He opened the door, disabled the alarm and called the alarm company. He took me into the lab.

One wall of the lab was covered with sample calculator displays, housings, and keyboards. I learned that Commodore had once been a giant in the calculator business.

Along the other wall in the lab was a bench. There an MDT was connected to a terminal -- no -- the PET. Chuck explained this was a prototype which had been to a show in Hannover, Germany. Leonard Trianiel had carried it there and showed it.

Bill Seiler loaded a program from a cassette called "Leonard's Lunar Lander." It was the same game I had played on my Jolt but the graphics were incredible. I could not believe it was so good.

Bill stayed at Commodore because he had to ride his bicycle home. Chuck, Shirley, and I drove to Saratoga where Chuck dropped Shirley off at their home. Chuck and I continued through Saratoga to La Hacienda, a motel on highway 9. It was 2 a.m. (4 a.m. my time). Chuck made me an offer of \$22,500 per year. I was too tired to accept or decline.

The next morning I called Chuck to come pick me up. His whole family, two daughters and a son, came along. We ate breakfast at Cocco's on Sunnyvale-Saratoga Road.

Chuck began to fill me in on the details of what my potential job would involve. They were buying the BASIC from a company called Microsoft in Albuquerque, New Mexico. Chuck was writing a screen editor. The hardware was being done by Comlog in Phoenix to a design by Commodore. My job was to write a file oriented operating system that made I/O easy to program from BASIC. Part of the I/O was internal -- tape, screen, keyboard -- and part was external -- the IEEE-488. Chuck explained the philosophy of having intelligent peripherals that took away no

programming resources -- RAM or ROM -- when they were attached.

after breakfast we went to Chuck's house on Chalet Lane in Saratoga. Bill Seiler joined us again and we were talking about the PET when a surprise visitor arrived.

Manny Lomas was the co-inventor of the Jolt with Ray Holt. They said that was how Jolt got its name -- because Manny was Mexican-American. Manny was working for Commodore as a consultant to work off an old debt with MOS Technology. That was the first time I knew that Commodore owned MOS. Manny was adapting the TIM, 6530-804 monitor, to work on the PET.

Chuck and I walked out by his swimming pool. The rainchaps were still splashing on the water. I told him I would take the job. There were many reasons. I was familiar with the 6502 microprocessor, I knew the companies: COMLOG, COMPAS, MOS, and Microcomputer Associates. I liked California better than Minnesota. And the salary was significantly better.

Chuck decided to put me to work that afternoon (Sunday, April 30). Chuck was leaving for Phoenix so he decided to leave me one of his cars to use while he was gone. Shirley drove up to Palo Alto with Bill Seiler and Chuck and I drove together in another car. At Commodore, Shirley typed up a job offer letter. I signed it. Chuck gave me an assignment to start designing my program. Chuck gave me a VW bug convertible with Pennsylvania plates and checked me into the Holiday Inn near Stanford. I was to stay there for two weeks and then fly back to Iowa to bring my car and possessions out. Chuck put the hotel on his personal B&A card. Chuck left for the airport.

I called my parents, my "boss" in IBM to decline his offer, and Bill Seiler. Bill and I went to dinner at Bob's Big Boy. Bill drove a tiny two seater Honda Coupe with Florida plates. After dinner I called some friends in Santa Cruz and drove down there for the evening.

by john feagans
from the collection of
andy finkel